

Remarks:

Claim Rejections – 35 USC 112

Examiner rejection #1 (Claim 1 recites the limitation “said friction surface” in line d and e...)

Applicant response – Claims 1,3 and 11 have been amended to “said first friction surface”, thus clearly pointing out the particular element.

Examiner rejection #2 (In regards to claim 1, the limitation “between” is unclear...)

Applicant response – Claim 1 has been amended to remove the “between” limitation. New limitations are explained under Examiner rejection #5.

Examiner rejection #3 (In further regards to claims 1 and 11, the limitation “span and spanning” are unclear...)

Applicant response – Claims 1 and 11 have been amended to remove the “span and spanning” limitations. New limitations are explained under Examiner rejection #5.

Examiner rejection #4 (In regards to claim 6, “being travel limited allowing initial cable feeding” is unclear.)

Applicant response – Claim 6 has been amended to separate the rejected limitation phrase into several limitations. The specific element that is travel limited is identified as “said roller”. This travel limited roller enables the continuous chains to maintain a minimum opening distance which the end of the cable feeds into. FIG. 12 and page 15 / paragraph 4 of the specification fully disclose this function.

Claim Rejections – 35 USC 102

Examiner rejection #5 (claims 1-4, 6-13 are anticipated by De Groot US 6,439,445. De Groot discloses a traction apparatus comprising: an elongate cable member 4; a friction surface 3; a second friction surface 3; means for driving 37 the first and second friction surfaces; means for applying pressure between the two friction surfaces and the elongate member; and the means for apply pressure 32, 33 spans the first friction surface and the second friction surface, wherein the means for applying pressure is continuously supported.)

Applicant response in regard to claim 1 – Claim 1 has been amended:

- a. longitudinal axis of elongate member identified
- b. motion of first friction surface identified
- c. motion of second friction surface identified as offset from first friction surface
- d. a roller which applies force to said first and second friction surface.

De Groot reads on (a., b., and c.) above. However, the (d.) limitation excludes the De Groot art. De Groot does not include a roller which applies force to both friction surfaces. Separate rollers are used for each friction surface. FIG. 15 of the Ellingson specification shows the single roller 48; applying force to the first friction surface 104; and second friction surface 105. Having one roller overlap the two friction surfaces is key to providing the continuous support of the roller. Page 15/paragraph 5 and Page 16/paragraph 1 of the specification further explain this principle.

Applicant response in regard to claim 2 – Applicant agrees with examiner that De Groot teaches a cable as an example of an elongate member in a traction device. Amendments to claim 1 to address rejection #5 should cause the limitation of claim 2 to be acceptable.

Applicant response in regard to claim 6 - No examiner argument is given for the claim 6 rejection. Applicant respectfully traverses that claim 6 is anticipated by De Groot. De Groot does not disclose any aspects of “pressure means being travel limited allowing initial said cable feeding.” Applicant respectfully requests examiner to specify the line or figure in De Groot of this disclosure.

Applicant response in regard to claims 3,4 and 7-13 –

Applicant does not understand how the Examiner rejection #5 argument applies to claims 3,4 and 7-13. If the rejection #5 argument applies to these claims, applicant respectfully requests the examiner to further outline this argument. Applicant notes that claims 3,4 and 7-13 are addressed with additional rejections below.

Examiner rejection #6 (In regards to claim 3 and 7, De Groot discloses the first and second frictions surfaces as chains and the chains are staggered.)

Applicant response in regard to claim 3 – Applicant agrees with examiner. Amendments to address rejection #5 should cause the further limitation of claim 3 to be acceptable.

Applicant response in regard to claim 7– Applicant respectfully traverses this rejection. Claim 7 states that “the links of said first chain and said second chain are staggered.” Fig. 13, page 3/paragraph 2 and page 16/paragraph 1 of the specification clearly demonstrate and define staggered links. Applicant is unable to find a demonstration of “staggered links” in De Groot. Applicant respectfully requests examiner to specify the line or figure in De Groot of this disclosure.

Examiner rejection #7 (In regards to claim 4, and 8-10, De Groot discloses the means for applying pressure is a plurality of rollers, see De Groot FIG.3)

Applicant response in regard to claim 4 – Applicant agrees with examiner. Amendments to address rejection #5 should cause the further limitation of claim 4 to be acceptable.

Applicant response in regard to claim 8 – Applicant respectfully traverses this rejection. De Groot does not disclose a plurality of rollers supported with a structural collar. FIG. 10 and page 15/ paragraph 2 of the Ellingson specification define the structural collar and related benefits. Applicant respectfully requests examiner to specify the line or figure in De Groot of the structural collar disclosure.

Applicant response in regards to claim 9 – Claim 9 has been amended. The amended claim includes the limitation of “said roller is continuously supported against said cable by at least 10% of said first links or said second links.” FIG. 13 and page 16/paragraphs 1-3 outline the continuous support principle and benefit. The roller in De Groot contacts only the “first links” and therefore is unsupported at the transition between links.

Applicant response in regards to claim 10 – Applicant respectfully traverses this rejection. De Groot does not teach “allowing said link to rotate without interfering with said cable”. This feature is outlined in FIG. 9 and page 13/paragraph 5 , page 14/paragraph 1 of the specification. Applicant respectfully requests examiner to specify the line or figure in De Groot of this disclosure

Examiner rejection #8 (With respect to claims 11-13, the method described in these claims would inherently result from the use of cable traction apparatus of De Groot as advanced above.)
Applicant response – Claim 11 has been amended. This claim 11 amendment is similar to the claim 1 amendment and similar applicant remarks apply.

Claim Rejections – 35 USC 103

Examiner rejection #9 (Claim 5 is rejected under 35 USC 103(a) as being unpatentable over De Groot in view of Babbin et al (US 3,946,918.) Babbin teaches a drive having a center worm gear 41, 42 for driving first and second friction surfaces in synchronous motion.)

Applicant response – Applicant respectfully traverses this rejection. Applicant agrees that Babbin teaches a drive having worm pinions and the friction surfaces would be driven in synchronous motion. A note on engineering terminology – normally, the “worm” or “worm pinion” is the input and the “worm gear” is the output. The following are applicant arguments of why Babbin does not disclose the limitation of claim 5:

- a. The word “center” is not found in US 3,946,918 and applicant does not understand the examiners inclusion of “center” in the rejection wording.
- b. Babbin shows two worm pinions with each mating gear intersecting a distinct worm pinion thread area. Claim 5 refers to a single “worm pinion”.
- c. Claim 5 further includes the limitation of “hollow” referring to the center of the worm pinion. FIG. 6 and page 3/paragraph 3 describe the geometry and purpose of the “hollow center worm pinon.” Babbin does not disclose a “hollow center” worm pinion.

Misc. amendments –

Claim 3 first line - 1 to 2 to correct antecedent error with “cable” in claims 9 and 10.

Claim 11 9th line - no antecedent basis for “cable” , changed to “elongate member”.

Claim 13 second and fourth lines – amended to align terminology with claim 11.

The above changes and/or explanation fully address each of the rejections of the 7-26-2005 office action. Applicant submits that Claims 1-13 are in condition for allowance at this time.

The examiner is respectfully urged to call the applicant at 515-832-8117 to discuss the foregoing claim limitations in an effort to reach mutually acceptable claim limitations if the foregoing limitations are not deemed adequate for this purpose.

Respectfully submitted,

Date - 9/26/2005

By - 

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